BIOLOGY 411: Senior Capstone
Spring 2014

INSTRUCTOR:

Dr. Holly Wichman

Office: Life Sciences South, Rm. 262

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OFFICE HOURS: Monday 3:00 – 4:00, Friday 2:00 – 3:00 or by appointment.

TIME AND PLACE:

Section 01: Tuesday, Thursday LIFE 163	3:30 – 4:20 pm
Section 02: Tuesday, Wednesday LIFE 163	3:30 – 4:20 pm

COURSE OBJECTIVES:

This course is offered to biology majors and others who satisfy the prerequisites as a "capstone" to their undergraduate studies. You have spent four or more years gaining knowledge of how science works, but have probably spent little time considering how this knowledge can be used to evaluate and address "real world" problems. The primary objective of the course is to provide you with an opportunity to do so. In this course you will critically read, consider, discuss, and write about specific critical issues facing the world today.

The major issues facing society today are complex, and conflicting data are not uncommon. Few of the decisions made by individuals or governments to address these problems are based on purely on scientific criteria. In fact, personal, political, ethical and economic considerations often play a greater role than scientific ones, and various preconceptions and the momentum of past practices may limit the solutions considered. The objective of the course is to expose students to the complexity of a major issue facing society today and provide an opportunity to see how the skills you have gained as an undergraduate can be used to inform you about these issues and help you decide if and how you will address them.

LEARNING OUTCOMES: Students who successfully complete this course will have improved their skills in:

- Finding scientific information and evaluating its reliability
- Exploring the interface between scientific training and real world issues
- Developing and supporting an opinion based on factual information
- Conveying opinions and information orally and in writing
- Engaging in rigorous and respectful debate

COURSE INFORMATION: Course information such as assignments and readings will be available on BbLearn.

READINGS:

Assigned reading for this course will come from the primary literature, government publications, and the popular press. In addition, we will read *Life at the Speed of Light – from the double helix to the dawn of the digital age* by J. Craig Venter. Buy this book online.

ATTENDANCE and PARTICIPATION:

Attendance is mandatory except for when an absence is excused for medical reasons or when authorized by the University.

Students are required to complete the assigned reading *before* the scheduled class period and should be prepared to participate in class discussions.

Participation of students in classroom discussions will be judged by the instructor and will account for 20% of the final grade. Participation will be assessed by both the frequency and the quality of contributions to the discussion. Full credit will require: 1) regular attendance; 2) evidence that you read daily assignments as judged from your ability to answer questions from the assigned reading; 3) frequent and substantive contributions to the discussion; and 4) conduct in class respectful of others.

Class discussions may sometimes become heated because of differences of opinion. This is a good thing because it means we are grappling with important issues, but remember to be respectful. It is ok to disagree with an idea or fact, but do not attack the person presenting the idea. If you are offended by some aspect of the discussion, it is your responsibility to speak up or to notify the instructor.

ACADEMIC HONESTY: Academic honesty is governed by Article II of the University of Idaho's Student Code of Conduct (http://www.webs.uidaho.edu/fsh/2300.html). Cheating on classroom or outside assignments, including plagiarism or presenting the work of others as your own, is a violation of this code. All incidents of academic dishonesty will be reported to the dean of students. Individuals guilty of academic dishonesty will receive a failing grade for the course.

PROJECTS:

Our major group project will be a series of formal debates on assigned topics. Each student will turn in a written synopsis of the affirmative and negative arguments for their topic and will participate in an in-class debate. This project will constitute 25% of your grade.

There will be other, smaller group and individual projects.

ESSAYS:

You will have four additional written assignments in this class consisting of short essays. Each essay will be turned in at the beginning of class on the due date as printed hard copy and as a text file (.doc or .rtf) uploaded to BbLearn. The time at which an assignment is uploaded to BbLearn will determine if the assignment is 'on time.' Late assignments will be penalized by 15% and must be turned in no later than one week after the due date.

Format: Each essay will have a header that includes the title of the essay, the due date and your name. Use 1" margins and double space the text. Use a font size no smaller than 12 point and adhere to page limits. Page limits for each assignment apply only to the written text and do not include tables, figures or references. Figures and tables are limited to one page unless otherwise indicated in the assignment.

Grades for these essays will be based on both content and writing mechanics (i.e. spelling, grammar, flow of ideas, etc).

COURSE GRADE:

There will be no examinations in the course.

Grades will be based on following:

Class participation	20%
Debate and written arguments:	25%
Other projects / quizzes:	15%
Written assignments:	40%